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Report of the High-level Advisory Board on Sustainable Development on its third session

(New York, 17-21 October 1994)

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I. EXECUTIVE SUMMARY

1. The third session of the High-level Advisory Board on Sustainable Development was held at United Nations Headquarters in New York from 17 to 21 October 1994. It examined four issues, in particular: sustainable food security for a growing world population; the need for mutual reinforcement between international trade and environment policies; value-based education for sustainability; and ways of forging new alliances for sustainable development.

2. The Board met with the Secretary-General on 21 October 1994. It also held a joint session with the Chairman and Bureau of the Commission on Sustainable Development; held informal discussions with the Administrator of the United Nations Development Programme (UNDP) and the Chairman of an informal General Assembly working group reviewing the working of the United Nations system; and its Bureau gave an informal briefing on the work of the Board to the Second Committee of the General Assembly. The Board took the opportunity to review its own method of working in the light of those discussions.

3. The Board noted that the Commission on Sustainable Development and the High-level Advisory Board itself are the two main new institutions created after the United Nations Conference on Environment and Development (UNCED). The Commission is the principal focus and discussion forum for governments. The Board is an independent group of experts, advising the Secretary-General and through him, the Commission, the Economic and Social Council and the General Assembly. Both the Board and the Commission are concerned about the lack of progress in implementing the social and economic changes needed for sustainable development. Trade, debt relief, aid and technology transfer and human resource development all need to be addressed. The level of financial aid to developing countries has actually fallen since UNCED. The coordination process within the United Nations system has a long way to go. Concepts of sustainable development should pervade the key United Nations agencies and Bretton Woods institutions. The Board agreed that its contribution to the Commission on Sustainable Development should be focused on cross-sectoral issues and resources for sustainable development.

4. The Board recognized that the demand for food will continue to mount as the world population grows. Agricultural production may need to double by the year 2025. Providing access to enough food for everyone on the globe will be an even greater challenge. But food production and access to food must be addressed within a programme that includes all sectors of environmental and social development. Most of the low-income, food-deficit countries are in Africa, and for such countries improving agricultural productivity, while essential, will not be sufficient. Political stability, secure land tenure for farmers, support for women who produce much of the basic food supply, investment in health and education, and the provision of financial incentives for investment in agriculture will all be essential.

5. There are many ways in which agricultural productivity can be increased by using land, water and labour more efficiently. Better cropping systems, biotechnology, information-based technologies, good soil management, and especially better management of water are all vital. But they need to be

developed within systems of integrated watershed and land-use management, and diversification of economic activity.

6. Trade liberalization and reduced subsidies for developed country agriculture could drive world food prices upwards. This could favour production in developing countries. It is essential, however, that more liberal trade policies and good environmental practice march hand in hand.

7. The Board concluded that food security will be crucial to long-term sustainable development. There must be more public and private investment in agricultural infrastructure and in transportation, communications and human resource development. Governments should create a favourable economic climate for environmentally sustainable private-sector activity, especially for investment in agriculture. They should invest more in women's education and health, and should strengthen the rights of women to own land and run businesses. They must encourage research and development. Water management technology and the use of solar plants for desalinization should be supported. People in developing countries should be guaranteed rights in the products developed from their biological resources. Local communities should be involved in all stages of natural resource development. The international community should give greater support to programmes to boost food production, increase stocks and minimize post-harvest losses in food-deficit developing countries.

8. There must be mutual reinforcement between policies on trade and the environment. Both trade and environment policies must be developed within the wider context of changes in the quality of growth in order to ensure that growth is less intensive in its use of raw materials and energy and more equitable. Both developed and developing countries need to change the quality of economic growth and ensure that it is sustainable.

9. Governments should take seven principles into account in this field, namely: environmental costs should be internalized; more equity between North and South must be created; where cost internalization will not protect key environments or species, other measures must be adopted; decisions should be taken at the lowest jurisdictional level consistent with effectiveness; there must be more international cooperation, including open procedures for resolving disputes; decisions should be based on the best science; and all interested people must participate in decisions and have full access to information.

10. The Trade and Environment Committee and Trade and Development Committee of the World Trade Organization (WTO) will need to work closely together, with suitable supporting expert panels and links to the Commission on Sustainable Development. It is vital that the Committee on Trade and Environment be enabled to address the environmental implications of trade policies properly. WTO is urged to open its meetings, and might benefit from specialized agency status. The Commission on Sustainable Development is invited to encourage the design of suitable eco-labelling.

11. Sustainable development must be built on a foundation of social and personal values. These will be greatly influenced by education and information. While some indicators of sustainable development will be environmental and capable of scientific measurement, others will be cultural or conceptual.

Future decision-makers must be trained to take an interdisciplinary approach that spans the environmental, social, cultural, economic and ethical implications of technological advance.

12. The Board concluded that national strategies for sustainable development must provide the context for education and information, involving many sectors of the community. Such strategies must go with the grain of culture and tradition. Individuals must be led to see that sustainable development is about enhancing quality of life. The informal media need to be committed to advancing sustainable development, alongside the formal educational system. Trainers must be trained, with government support. There needs to be a greater sense of urgency, but the educational process must incorporate a long-term perspective. It must give the future custodians of the Earth the practical knowledge they will need.

13. Alliances between all sectors of the community and at the international level between the United Nations system and other entities are essential and must be planned, as part of the mechanism for implementing Agenda 21. The roles of the various partners must be clearly stated. The United Nations system itself must be selective in defining its partners, and the Board has suggested some criteria it might use.

14. Different kinds of alliances are needed in different cultural settings. The United Nations system should build links at the national level, and should encourage decentralization of actions for sustainable development within countries. Cross-sectoral links across government and with the non-governmental community are important. Good progress is being made with the United Nations review of arrangements for consultation with the non-governmental world. The structure for linkage with major groups of non-governmental organizations needs further elaboration. Collaboration with the United Nations system in no way challenges national sovereignty. The Board itself might benefit from dialogue with the non-governmental sector and will consider how to undertake this.

15. The United Nations and the world community must act now to plan for sustainable development to give a world of perhaps 10 billion people a reasonable quality of life. But success will depend on a reallocation of resources. The major economic powers should honour the pledges they made at UNCED. Unnecessary military expenditure is wasting vast resources that would be better invested in sustainable development as the real basis for long-term security. The Disarmament Commission of the General Assembly should examine how to divert finance from military expenditure to sustainable development.

16. The Board reviewed its manner of working and concluded that its principal role must be to define and state issues that need the attention of the Commission on Sustainable Development and other components of the United Nations system. It is not appropriate for the Board to write detailed analytical papers; these can be obtained from the experts within the specialized agencies and non-governmental bodies. In future, the Board will identify topics for analysis between sessions by correspondence or through the commissioning of position papers. During its 3-day formal sessions, the Board will devote one day to a dialogue with individuals with expertise in topics with which it is concerned from components of the United Nations system and other bodies, and two

days of plenary session, at which it will hope to define issues clearly and discuss these with the Secretary-General.

17. The Board will continue to analyse key reports on sustainable development. It will consider how the 5-year evaluation of the UNCED process, due in 1997, should be conducted. During its third session, the Board identified a number of possible themes for future consideration, including the mobilization and transfer of resources to developing countries (especially to ensure that Governments stand by the commitments they entered into at UNCED); the need for changing production and consumption patterns in developed and developing countries; mechanisms for integrating financial institutions in the sustainable development process; mechanisms for securing the transfer of budgetary expenditures from military purposes to development; coordination in the United Nations system, and with other institutions and events; approaches to sustainable development based on the integration of sectoral activities and initiatives at the regional and local levels, and the adoption of indicators of sustainability appropriate to developing countries; long-term action for food security; and the scenario for and pathway towards a sustainable world in 2045.

II. LINKAGES BETWEEN ECONOMIC, SOCIAL AND POLITICAL DEVELOPMENTS IN A CHANGING WORLD

A. Sustainable food security for a growing population

1. Socio-economic sources of stress in food production systems

18. Although the rate of growth of the world's population has slowed and is expected to slow further as governments implement the Programme of Action of the International Conference on Population and Development, the absolute increase by 2025 will be large. Per capita incomes in a large number of countries are expected to rise substantially, so that the world average will increase, with consequences for the structure and level of demand for food. The demand for cereals both as final consumption and as animal food can thus be expected to increase steadily. One plausible scenario would point to the need to nearly double food production by the year 2025.

19. In aggregate, agriculture has so far responded remarkably well to the challenge of providing an adequate supply of food to an ever-growing world population. This has been made possible partly by an expansion in the area of land farmed and partly by increased yields following technology improvements, together with a dramatic increase in the use of external inputs. Globally, food production can probably be increased enough to meet the expected increase in effective demand, but these gains may come at increasing costs in some cases and will certainly require continued research aimed at increasing production.

20. A far greater challenge is that of providing access to food for everybody on the globe. According to estimates of the Food and Agriculture Organization of the United Nations (FAO), nearly 800 million people are chronically undernourished. In 20 countries, home to 370 million people, the average per capita food availability is less than the equivalent of 2,100 calories per day, indicating a very high incidence of hunger and malnutrition. Sixteen of

these countries are in Africa. Moreover, in most of these countries, population growth has been higher than the average for developing countries, and the rate of growth of agricultural and food production has been lower than average. Further, there is evidence that the requirement for ever-increasing agricultural output cannot be accommodated in an environmentally sustainable manner with present agricultural practices. The traditional "co-evolutionary process", in which societies, farming and ecosystems used to have sufficient time and space to adjust mutually through complex feedback mechanisms, is no longer adequate in all cases. Instead, rural dwellers in many parts of the world have overcropped and/or overgrazed the land, and have resorted to excessive fuelwood collection and other unsustainable practices, resulting in a deterioration in the natural resource base. Population pressure and poverty are in many cases the root cause of environment degradation. Of course, overconsumption and certain agricultural practices in high-income countries are also responsible for such degradation. But often, it is population growth in conjunction with adverse social, economic and political factors that brings about widespread environmental deterioration.

21. Food production and access to food cannot be dealt with in isolation from a programme that includes all sectors of economic and social development. This involves investing in health, with an emphasis on maternal health; providing family planning services in the context of reproductive health; reducing infant mortality; providing education; and empowering women to be equal partners in development. Such investments not only improve the lives of people but also yield rates of return that are higher than in the producing sectors themselves.

22. Agricultural development is fundamentally demand-driven. Producers must then be able to respond. Market mechanisms must be allowed to operate in order to create the incentives to invest in agriculture. This means correcting national policies that have distorted domestic prices and strengthening international mechanisms to assist countries harmed by secular declines or sharp fluctuations in international commodity prices.

23. In the case of the low-income food-deficit countries, mostly in Africa, improving agricultural productivity is essential but will not be sufficient for most of them. Actions in the agricultural sector must therefore be part of a broader approach. Many of these countries face severe constraints, such as limited land, limited water and periodic drought. Many of them have been plagued by chronic communal strife, periodic breakdowns of public order and even civil war. The combination of low income and political instability has greatly restricted the ability of Governments to implement development policies, such as investing in human resources and rural development. This situation has been further aggravated by low commodity prices and a sizeable debt overhang. This in turn leads to low or non-existent private-capital inflows, little technology transfer and a perpetuation of low incomes.

24. Escaping from this vicious cycle is in many cases made more difficult by inappropriate land-tenure arrangements. Land tenure often determines not only access to land but also access to other resources and inputs that are essential for pursuing sustainable practices. Farmers who do not own the land or do not have long-term tenancy rights are less likely to invest in land conservation and improvement, since they may not benefit from such an undertaking. They mine the land and let it deteriorate. Local people are the best placed to maintain and

enhance the diversity of their natural, social and cultural conditions and to protect their environment, if they have secure access to sufficient agricultural resources and are allocated clear and equitable rights and obligations with regard to natural resource use, including by means of land reform where necessary.

25. Women play a critical role in rural development and agricultural activities. They produce 60 to 80 per cent of the basic food supply in sub-Saharan Africa; grow 70 per cent of the crops on the Indian subcontinent; perform over 50 per cent of the labour involved in intensive rice production in Asia as a whole; and manage complex agro-silvopastoral complexes in Central and South America. However, women are often in a disadvantageous situation with regard to social, economic, technological and legal conditions that frustrate or prevent them from being given the opportunity to fully participate in agricultural development. There is a need for legal, administrative and other measures to promote the access of women to land, agricultural credit, appropriate agricultural technologies, extension programmes, membership in agricultural cooperatives, training in use of fertilizers and pesticides, and training in conservation and land rehabilitation measures.

26. Expansion of agriculture to new lands will have to take into account the commitments that the signatories to the Convention on Biodiversity will make to conserve biodiversity and promote its sustainable use. Developed and developing countries alike will develop national plans, strategies and policies towards that end. Among other things, these can be expected to include the establishment or strengthening of networks of national protected areas in order to protect species, habitats, representative ecosystems and genetic variability within species. They will also aim to manage biological resources outside of protected areas, including degraded ecosystems, with a view to ensuring that their use is sustainable. In low-income countries where these aims conflict with the efforts of poor farmers to expand cultivation, special programmes with international financial and technical support will be needed to assist rural communities in developing alternative livelihoods.

2. Improving agricultural techniques

27. Increasing agricultural productivity involves using land, water and labour resources more efficiently, often in combination with increasing levels of external inputs. Intercropping, companion cropping, agro-forestry, indigenous farming techniques involving beds and composting, ponds and water-conveyance systems, bench terraces, and incorporating deep-rooted legumes and tree species into farming systems can be used to layer more than one crop upon a given space of earth and use soil nutrients and moisture more efficiently.

28. Biotechnology can contribute considerably to agricultural intensification. It holds promise for increasing the yield, quality, efficient processing and utilization of products; for decreasing reliance on agro-chemicals and other external inputs; and for improving the conservation and use of genetic and other natural resources. Applications are being held in check by the need for still more knowledge on the variation, genetic control mechanisms, management and

environmental requirements of the biological material used and the wait for the elaboration and adoption of appropriate legal and regulatory measures.

29. Modern biotechnology should be perceived as a new group of tools to be used as adjuncts to conventional technologies. The kinds of plant-breeding efforts (hybrids, multiple-resistant strains) that have already boosted the productivity and sustainability of many crops deserve continued emphasis because they can enhance the yield capacity and stabilize production in many environments where food crops are grown.

30. Improving the efficiency of farming by the adoption of information-based technologies, such as better timing of farm operations, developing more effective crop rotations, intercropping, and optimizing the use of fertilizers and pesticides and, where appropriate, irrigation water, are all important to agricultural success. To be effective, agricultural technology development must be based on a systems approach and must include a strong element of farmer participation with equal opportunities for men and women.

31. The importance of water as a scarce and precious natural resource is receiving increasing attention as the reality of a finite limit on global water supplies begins to make itself felt. By and large, problems relate to waterlogging and salinization, and excessive lowering of water tables; build-up of pollutant concentration in groundwater; high construction, operation and maintenance costs of irrigation systems; inadequate maintenance and cost recovery; pest build-up and increased health hazards due to waterborne diseases; low water-use efficiency; and, especially, inadequate distribution of benefits to users.

32. Even with further expansion of irrigation, the bulk of the world's agricultural land will remain dependent on natural rainfall. The main issue in increasing productivity and sustainability in rain-dependent areas is how to maximize conservation and utilization of the natural rainfall, coupled with the development and adoption of technologies to promote integrated soil, water, crop and livestock management consistent with environmental sustainability at the farm household level. The approach must be geared to minimize and manage risk and optimize the efficiency of natural resource use.

33. Maintaining soil quality involves several factors, including limiting soil erosion and nutrient mining; restoring, maintaining or raising soil organic matter levels; preventing excessive soil acidification and pest and weed build-up, and conserving biological diversity. Most soils in the humid tropics, once cleared of their natural forest cover, have very low organic matter content, and it is important to take deliberate steps to increase it.

34. In hills and mountain areas, many of the control measures needed to reduce surface run-off and maximize soil moisture storage in hill areas are effective only when incorporated into a comprehensive watershed approach. This comprises land-use planning, protected-area management, afforestation, torrent control, small hydropower development, soil and water conservation, soil nutrient management, grazing control, agro-forestry, varietal improvement, integrated pest control, and improvement of physical and institutional infrastructures. Horticulture, flower production and specialized highland crops are some of the

products that may find an attractive market, both domestically and for export. Activities that may diversify the mountain economy are sericulture, dairy industries, bee-keeping, poultry, fish farming, mushroom cultivation, game farming, handicrafts and cottage industries. Tourism in easily accessible areas and eco-tourism (trekking etc.) can develop into sources of off-farm employment.

3. Trade and food security

35. The effects of trade liberalization deriving from the Uruguay Round of multilateral trade agreements on developing countries are of two kinds: those stemming from changes in world markets brought on largely by reduced protection in the developed countries, and those resulting from adoption of the kinds of policies permitted by the Final Act.

36. A reduction in support for temperate zone products is expected to lead to a lower output in developed countries than would otherwise have been the case, exerting upward pressure on world market prices and reducing food surpluses. To the extent that the anticipated higher world market prices for basic food commodities are passed on to producers in developing countries, some increase in the production of these commodities would be expected.

37. Other expected effects on developing countries are the following:

(a) Expected changes in net export earnings of developing countries in both temperate and tropical products are relatively small;

(b) Although not all developing countries are expected to realize net trade gains from liberalization of agricultural trade, for developing countries as a whole the gains would outweigh the losses;

(c) Anticipated gains and losses are concentrated both by product and by geographical region, with high to middle-income countries gaining more than the poorer countries;

(d) Expected losses of developing countries are largely concentrated in Africa, whereas expected gains are concentrated in Latin America and Asia. Africa's losses are mainly due to the shrinking of preferential margins it enjoys in developed country markets under the General System of Preferences (GSP), the Lomé Convention and other trade arrangements;

(e) The more they engage themselves in the reform process by removing some of the direct and indirect policies that have discriminated against agriculture in the past, the greater the net trade gains to developing countries from agricultural trade liberalization will be.

38. As regards specific losses by the least-developed and net-food importing developing countries, the above-mentioned decision on the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations could, in principle, help this group of countries in the event of higher world food prices and import bills, through such means as enhanced financial assistance for agricultural development and increased food aid.

39. The disciplines on export subsidies and export restraints are important in principle, because they bring conditions of trade in agriculture closer to those of the other sectors. Developing countries, as well as developed countries, will thus face a changed set of policy options. For most developing countries, however, any policy initiatives will take place within the framework of structural adjustment programmes.

40. The dual influences of changes in the international trading environment and structural adjustment programmes generally require Governments in developing countries to shift the focus of their interventions away from attempts to influence the price mechanism. The required shift is likely to be towards investment in the infrastructure of the agricultural economy, including programmes to develop the marketing services, storage facilities and credit accessible to the rural population.

41. Adoption of sustainable agricultural and rural development policies by only a few countries does not represent a satisfactory approach. The imposition of taxes that internalize the full environmental costs to producers in one country may simply lead to production being concentrated in countries where such costs are ignored. To avoid this, two approaches may be pursued. Under the unilateral approach, countries seek to adopt policies that tend to equalize the treatment of domestic and foreign producers via the imposition of domestic charges on both local and imported goods. Under the multilateral approach, countries undertaking cost internalization policies would have some guarantee that other countries would be doing the same or would be taking similar steps so that the competitive position of producers in different countries would be little affected.

42. As regards the availability of food in the developing countries, the policy prescriptions to make environment and trade compatible via the introduction of appropriate environmental policies need not have major effects on the level of food production. Environmental stress in the developing countries is largely concerned with the pressure both to use marginal lands, which suffer from soil erosion or soil fertility losses, and to intensify the use of irrigated land, which results in waterlogging and salinization. A policy that restores fallow or introduces appropriate vegetative cover may lower output somewhat in the short run but hardly at all in the long run. In the more fertile areas, it is unlikely that most developing countries would choose to introduce very restrictive environmental policies while their level of income and food security is low.

43. As regards the stability of supplies, good environmental practice in conjunction with more liberal trade policies should assist the stability of food supplies by concentrating efforts on the more fertile areas with more sustainable production methods, which usually foster product diversification and other practices that stabilize output.

4. Conclusions and recommendations

44. Regarding sustainable food security for a growing population, the Board agreed on the following conclusions and recommendations:

(a) Increased public and private investment in agricultural infrastructure, including irrigation and drainage, rural energy, transport and markets will be required; in this connection, a long-term plan should be developed to reclaim the 10 million square kilometres in Africa lost to tsetse fly infestation.

(b) Governments should create a favourable economic climate for environmentally sustainable private-sector production and distribution of fertilizer and seeds, agro-chemicals and farm equipment and for their rational use, taking into account the need for job creation in rural areas.

(c) Increased public and private investment in human resources development, transportation and communication infrastructure and removal of anti-export bias should all be undertaken to facilitate the creation of non-agricultural jobs and exports in food-deficit developing countries; in this connection, particular attention should be given to prevention of harvest and post-harvest losses.

(d) Governments should increase investment in women's education and health, and in programmes to reduce infant mortality; they should also remove legal and de facto barriers to women entrepreneurs so as to ensure their right to own land and enter into commercial credit agreements in their own names; the actions recommended in the Programme of Action of the International Conference on Population and Development for gender equality, equity and employment of women should be fully supported and implemented at all levels.

(e) The policy environment must be favourable if agricultural investment is to pay off. This means continued attention to input and output pricing policies within the context of structural adjustment, and a new focus on user rights.

(f) It is extremely important not only to reverse the current trend of declining support to research and technology development but to strengthen further the research capabilities at all levels; in particular, developing countries should be assisted in developing their own capacity for biotechnology research and development.

(g) On-farm rainwater management with a view to increasing infiltration, harvesting the rainwater run-off and recycling it at critical stages of moisture requirement of the crop should constitute the core of technology development for rain-dependent areas.

(h) International support should be provided for research into the technical and economic feasibility of using solar energy to power desalinization plants to provide water for food production in arid coastal areas.

(i) Special Contracting Parties to the Convention on Biological Diversity are invited to develop further the intellectual property rights regime of article 16 of the Convention to guarantee source countries' access on concessional terms to technologies developed with their biological resources and to provide for compensation on the basis of farmers' rights.

(j) Governments should promote the active involvement of the local community in all stages of planning and management of natural resource use for productive activity, through a grass-roots approach, including the encouragement of user groups, particularly for women; delivery of new technologies should be carried out using a participatory systems approach, with special attention to targeting investment on intended beneficiary groups, where appropriate.

(k) The international community should provide more adequate financial support to programmes that boost food production and productivity in food-deficit developing countries and that enable developing countries to take advantage of new opportunities offered by trade liberalization.

(l) One possible instrument that has been suggested to avoid the adverse competitive effects of cost internalization is the International Commodity Related Environmental Agreements (ICREA). More work needs to be done on this approach to test its economic and political feasibility.

(m) Since global food stocks may decline in the future as a result of reduced subsidies in developed countries and food aid supplies may be constrained - because historically food aid has been linked to the level of stocks - countries should take advantage of the provisions of the Final Act that allow expenditures on food-security stocks to build up such stocks, including food-security stocks for food aid purposes. Countries may also seek to stabilize prices through the use of safeguard mechanisms and by varying import tariffs under the agreed ceilings, as well as by recourse to market instruments that reduce risk.

(n) The international community should stand ready to provide adequate volumes of food aid and financial assistance to help poor countries finance higher food-import bills resulting from trade liberalization in the short term and boost domestic production in the long term.

(o) Short-run assistance should be provided to assist farmers on marginal lands in adjusting to the adoption of more sustainable production patterns and to assist poorer consumers facing higher food prices.

B. Trade and environment: the need for mutual reinforcement

1. Introduction

45. The relationship between international trade and the environment has emerged as one of the most prominent issues on the international agenda. The development of Agenda 21 1/ and the negotiations of the North American Free Trade Agreement (NAFTA) have highlighted the difficulties involved in reconciling international trade and environmental objectives. The discussion in the preparatory committee and at UNCED itself underlined the fears of many developing countries that environmental concerns in the North could give rise to a new form of conditionality and in the trade area to "green protectionism". The UNCED parties agreed that sustainable development would generally require an open, equitable, secure, non-discriminatory and predictable multilateral trading system. In addition, they warned against the use of trade restrictions or

distortions as a means of offsetting differences in cost arising from differences in environmental standards and regulations. In an indirect reference to the tuna dolphin panel decision, they agreed to shun unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country, opting instead for international cooperation.

46. In chapter 2 and elsewhere in Agenda 21, it was also agreed that sustainable development would require domestic reforms and international assistance in such areas as economic development, improved market access and commodity prices, environmental management, technology transfer, financing (debt relief, foreign investment, official development assistance) and institutional capacity-building. Agenda 21 took the view that environmental protection and trade liberalization could be mutually reinforcing provided that rules could be developed and enforced to avoid conflict between the two.

47. The negotiation of the free-trade area in North America stimulated a lively public debate on the relationship between trade and the environment in Canada, the United States of America and Mexico. President Clinton's need to secure environmental support for ratification of the NAFTA agreement in the United States Congress led to the development of an environmental "side agreement", including a North American environmental commission. NAFTA thus became the first trade agreement to include specific environmental conditions.

48. Finally, the environment made it into the Uruguay Round. Although environmental issues had played a minor role in the negotiations, the United States of America, aided by some European countries, pressed for some sign that the contracting parties were prepared to assign a higher priority to the issue. Accordingly, the Marrakesh Declaration called for the creation of a Trade and Environment Committee in the new WTO.

2. The trade versus environment debate

49. Trade experts feel that trade liberalization has enjoyed remarkable success. Since the establishment of the General Agreement on Tariffs and Trade (GATT), according to estimates of its secretariat, tariffs have been reduced from an average of 40 per cent to about 5 per cent and world trade has increased by approximately 500 per cent, twice the increase in global gross domestic product (GDP). The steady increase in global income enjoyed by many countries in the post-war period would not have been possible without the explosion of global trade. The calls for environmentally based trade restrictions are the exceptions to the established trend towards trade liberalization, which the trade community is reluctant to reverse. The broad new exceptions to those rules proposed by some environmentalists, based on such notions as environmental costs and sustainability, present a host of new problems that makers of trade policy are hesitant to address. The trade community fears that the environmental community may fall into the arms of the protectionists.

50. On the other hand, environmentalists object to trade liberalization without strengthened environmental protection measures on the basis of four major propositions:

(a) Without adequate safeguards, trade can cause environmental harm by promoting economic growth beyond sustainability;

(b) Trade liberalization often entails market-access agreements that can be used to overrule domestic environmental legislation;

(c) Trade restrictions should be available as leverage to promote world-wide environmental protection, particularly to address global problems;

(d) Countries with lax environmental standards have a competitive advantage in the global marketplace and put pressure on countries with high environmental standards to reduce the rigour of their requirements.

51. Unfortunately, the debate on trade and environment is in danger of falling into the same trap that captured much of the debate on this subject at UNCED. Without the win-win agenda of sustainable development, the discussion begins to revolve around balancing rather than integrating trade and environmental concerns. In many cases, the debate is explicitly cast in a trade versus environment framework.

52. In the absence of appropriate complementary policies, international trade liberalization could lead to increasing negative environmental externalities. This stands in contrast with the urgent need to address global environmental challenges, such as ozone depletion, climate change, the loss of biodiversity, the shipment of toxic chemicals and hazardous wastes and the destruction of forest cover. It is therefore imperative for all economic policies, including trade policies, to take the environment into account.

53. Sustainable development therefore not only requires growth but a sea change in the quality of growth to make it less raw material and energy-intensive and to make economic growth far more equitable. It requires measures that allow for the limitation of population growth and respect for the rights of future generations. It requires measures to reduce the consumption of raw materials and energy in the developed countries, which need not lead to lower living standards, while allowing space for the developing countries to expand their use of those commodities. It requires measures to drastically reduce pollution in both developed and developing countries through technological development and dissemination with international support. These changes are required globally as part of an interconnected package to maintain and improve the earth's stock of ecological capital, to improve the distribution of income, and to reduce our economic and ecological vulnerability.

54. Massive infusions of capital from developed to developing countries and better use of national resources in developing countries will be key elements in the transition to sustainable development. Both developed and developing countries need to change the quality of economic growth. The annual costs of , cleaning up the tremendous social deficits in the developing world in water supply, housing, food supplies and education, and making the transition to less resource-intensive and more environmentally efficient technologies were estimated at UNCED at $600 billion, including about $125 billion as grants or on concessional terms from the international community. Foreign-direct investment is not to be belittled. Under the right circumstances, it can provide access to

substantial amounts of capital and new technologies. Even if it is forthcoming, however, most of it will be highly concentrated in relatively few countries.

55. As a result, much of the resources for sustainable development will need to come through increased trade and market access, as well as the availability on reasonable terms of more resource and energy-efficient technologies.

56. At its second session, the Commission on Sustainable Development focused on measures to promote the integration of trade, environment and sustainable development. It highlighted the need to approach any efforts to make trade and environment mutually supportive in the framework of multilateral cooperation in order to avoid disguised protectionism in the name of environmental standards while preserving and enhancing the ability of countries to achieve and maintain high levels of environmental protection. The Commission also emphasized the need to give consideration to the specific conditions and development requirements of developing countries as they move towards internationally agreed environmental objectives.

57. The International Institute for Sustainable Development (IISD) recently brought together a broadly representative group to develop a set of principles to span the trade, environment and development communities. The IISD principles were designed to help ensure that future trade agreements would be designed to foster the transition to sustainable development. The group based its work on three key assumptions:

(a) The need for poverty alleviation: sustainable development cannot be achieved world wide while massive poverty persists; poverty alleviation is a central objective of development, and a key concern for environmental policies;

(b) The importance of environmental policies. Domestic and international environmental policies are of paramount importance for all aspects of sustainable development;

(c) The role of trade liberalization. Barriers to trade can create impediments to the achievement of sustainable development, particularly for developing countries, and trade liberalization is an important component of progress towards sustainable development for all countries.

58. IISD developed seven principles from these basic assumptions and urged that they be treated as an interdependent and mutually reinforcing whole. Somewhat simplified and modified, the principles can be said to encourage:

(a) The progressive internalization of unpaid environmental costs, bearing in mind all of the political and economic difficulties involved;

(b) The creation of a greater degree of equity between North and South through capacity-building, debt relief, increased development assistance, trade liberalization and technology transfer;

(c) Special measures to maintain environmental integrity, to avoid irreversible harm to plant and animal species and to protect valued areas, where these values cannot be adequately captured by cost internalization;

(d) Reliance on subsidiarity and the taking of decisions at the lowest jurisdictional level consistent with effectiveness. This allows for the existence of differential standards within countries or between countries to reflect differences in environmental conditions or development priorities. This principle is qualified by the constraints on sovereignty imposed by environmental effects which cross domestic boundaries;

(e) Greater international cooperation, as well as more open, effective and impartial dispute settlement procedures;

(f) The use of the best science as a basis for decision-making and the use of the precautionary principle in the absence of a scientific consensus;

(g) Timely, easy and full access to information by all affected or interested parties, and public participation and accountability in the decision-making process.

59. The agreement to establish the World Trade Organization to replace GATT invites reflection on a number of features of the present interim arrangements that could be improved upon. WTO needs to acquire the competence to assess the impact of environmental policies on trade and the impact of trade policies on the environment. The decision establishing WTO calls for the creation of both a trade and environment committee and a trade and development committee, an arrangement that might make the integration of environmental concerns in trade and development policies difficult. In the past, GATT processes have lacked transparency. GATT meetings have been held behind closed doors, while dispute resolution panels have met in private and their reports have often not been officially published until reviewed by the GATT Council. Non-governmental organizations, business and labour representatives have not been invited to attend.

60. The specific policy issues involved in the trade/environment nexus are extremely complex and varied. Their solution not only involves the marshalling of trade expertise but also requires the services of environmental specialists and scientists in such areas as climatology, biodiversity, toxicity and the development of national and international environmental policies. In the case of global warming, some of the policy complexities were surmounted by virtue of establishing an Intergovernmental Panel on Climate Change (IPCC). The Commission on Sustainable Development has recommended that close cooperation is needed between GATT/WTO, the Commission, the United Nations Environment Programme (UNEP) and the United Nations Conference on Trade and Development (UNCTAD), as well as the World Bank and the International Monetary Fund (IMF). Environmental as well as trade experts should convene in a forum that has the mandate to conduct, coordinate and analyse scientific studies related to the interrelationship between trade and environmental protection. Built on a sound scientific basis, such a panel should then make recommendations to the Commission on Sustainable Development and WTO on how best to have trade and environment mutually reinforce each other.

61. Greater openness must be brought to bear on the dispute resolution process itself, or it will continue to come under attack from environmental groups and some Governments. The groups and alliances that have emerged from UNCED and are

becoming involved in other international forums have a great deal to offer to the trade and sustainable development process, especially community-based, business and standard-setting organizations.

62. Another important emerging issue is that of eco-labelling. In an increasingly global world market, consumer preferences, shaped by social instruments such as eco-labelling, are becoming increasingly important. Eco-labelling criteria based on production and process methods, especially if based on a rigid methodology, however, may become disguised trade barriers. Alternatively, the credibility of eco-labelling schemes can be undermined if different schemes proliferate. Several initiatives have been taken in the field of forestry, such as the Forest Stewardship Council's initiative to develop a widely acceptable criterion for eco-labelling in forestry, and similar efforts by the International Organization for Standardization (ISO). But these initiatives have lacked the active involvement of developing countries.

3. Conclusions and recommendations

63. Regarding trade and environment, the Board agreed on the following conclusions and recommendations:

(a) Governments are invited to take the principles described above into account in the ongoing effort to make trade and environment mutually supportive;

(b) The Trade and Environment Committee and the Trade and Development Committee of WTO are invited to work closely together. The Trade and Environment Committee should have equal numbers of representatives from trade and environmental ministries;

(c) The Trade and Environment Committee should grant observer status to the Commission on Sustainable Development on the same basis as it grants status to all other regular observers;

(d) Consideration should be given to the establishment by WTO, UNEP and UNCTAD of an intergovernmental panel of environment, development and trade experts with a mandate to conduct, coordinate and analyse scientific studies related to the interrelationship between trade and environmental protection. Built on a sound scientific basis, such a panel should then make recommendations to the Commission on Sustainable Development, WTO and other relevant United Nations bodies and organizations on how best to have trade and environment mutually reinforce each other;

(e) WTO is encouraged to open its meetings, including meetings for dispute settlement, to observers from non-governmental organizations, citizens groups, standard-setting organizations and the business community;

(f) In order to ensure appropriate linkages with the intergovernmental bodies of the United Nations system responsible for economic and social issues, serious consideration should be given to according specialized agency status to WTO under Article 57 of the Charter of the United Nations;

(g) Considerations should be given to the establishment of an interim unit to service the Trade and Environment Committee in the WTO secretariat. This unit could be staffed by UNDP, UNEP, UNCTAD and FAO in order to bolster the expertise of the WTO secretariat;

(h) With respect to eco-labelling, the Commission on Sustainable Development is invited to encourage UNCTAD, UNEP, the United Nations Industrial Development Organization (UNIDO), WTO, FAO and the World Health Organization (WHO) to collaborate in the design of eco-labelling programmes for various products that could effectively stimulate trade within the context of sustainable development.

III. VALUE-BASED EDUCATION FOR SUSTAINABILITY IN THE CONTEXT OF CAPACITY-BUILDING

A. General considerations

64. The underlying and fundamental questions appear to be:

(a) How to help people understand the real nature of sustainable development, the minimal requirements for sustainable societies and the changes in individual lifestyle that would be needed in order to bring these about;

(b) What kinds of values, when held by individuals, would both lead them to personal fulfilment and help them to contribute to the establishment of sustainable societies.

65. These questions need to be resolved before the development of educational materials is addressed, because social values are determined by individuals, although they are greatly influenced by education and information.

66. Personal satisfaction comes from respecting others; being valued by others; having a sense of contributing to the community; feeling able to worship, speak and live one's values without fear; and having a capacity to enjoy personal freedom and to control how one's own life and that of one's children and grandchildren will develop. Sustainable societies are favoured when individual values lead to cooperation rather than competition; when they advance community welfare values rather than individual gains; when they show respect for the Earth and other forms of life and provide for their care; and when they make people willing to accept some constraints on personal choice for the sake of other people and future generations.

67. Sustainable development has to be pursued in a cultural context. Some indicators are environmental and capable of scientific measurement, such as the state of the soil, the availability and quality of water, agricultural productivity and biological diversity, and levels of pollution. Others are social and industrial, such as the availability and use of energy, economic production, human health, and the availability of health care, education and social infrastructure. Still others are conceptual, such as the adequacy of economic valuation of environmental resources, itself a key to sustainable use.

It was suggested that energy is so fundamental that an energy unit might be used as a universal currency.

68. The Charter of the United Nations commits the Organization to seek global security. This should not be viewed only in military terms. Environmental security is a key to the future. Governments tend to have a short-term vision, and the United Nations needs to lead them to think about the basis of security in 40 years' time. This in turn will demand a definition of the availability of environment resources, especially in terms of water, agricultural production and energy. Education and information systems must be designed to build awareness of this context of development and of the individual values and lifestyles the future will demand.

69. The Rockefeller Foundation has embarked on a programme for developing a leadership educated in the values of sustainable development among young government administrators, corporate executives, media personnel and professional fraternities. The programme covers a number of countries throughout the world and its implementation is designed to develop both national and international linkages. The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Cousteau Society are promoting a network of 100 university centres to develop the new field of "ecotechnie". This is based on the need to train future decision-makers to take an interdisciplinary approach to the promotion of technology by evaluating the environmental, sociological, cultural, economic and ethical implications of technological innovation and implementation. The Earth Council and the International Green Cross have launched an initiative to revitalize efforts to prepare an Earth Charter.

B. Conclusions and recommendations

70. Regarding value-based education for sustainability, the Board agreed on the following conclusions and recommendations:

(a) Many components of the community, including scientists, religious groups, business and other groups have to be involved in value-based education, and governmental and non-governmental organizations components, as well as regional or national United Nations representatives, need to be brought together; hence networks are essential;

(b) Strategies are needed; national programmes for sustainable development provide the context for education and the dissemination of public information. In a number of countries, Governments have taken the lead, brought sectors together and established networks. Major social groups and committed individuals have made positive contributions in helping to shape those programmes. If this kind of response does not occur, sustainable development will not take place;

(c) Strategies for sustainable development must go with the grain of culture and tradition and seek public commitment through education and information. In this context, it is imperative that the language and nuances of

communication should take into account the basic culture and tradition of the targeted societies;

(d) The key is for individuals to see that sustainable development is about enhancing quality of life, not merely material wealth. Indicators of sustainable development must relate to the achievement of basic human needs and the satisfaction of basic human aspirations within a healthy and well-managed environment;

(e) There are contradictions in the attitude of some Governments to education and public information. On the one hand, formal curricula are very much the concern of Governments and are advanced through official agencies. On the other hand, much informal education is left to the mass media and these can be under the influence of Governments or politically motivated groups or can depend on advertising revenues. These influences may promote particular political objectives and may also advocate consumerism, competition and an equation of monetary wealth with success. The dilemma is that constraints on the media, however well intentioned, can easily be represented as attempts at public indoctrination. The informal educational media should be urged to develop and adopt criteria to guide their promotion of sustainable living;

(f) It is essential to train the trainer, and Governments can and should do so. Another beneficial action is to publicize advances in sustainable development and the individual values and community actions on which these advances rest so that they are copied. But such dissemination must be undertaken with cultural sensitivity: values and approaches are not readily transferred between very different societies. Too many of the strategies and actions being advocated today are little more than adjustments of the prevalent Western culture, and these may not be appropriate to the needs of the developing world;

(g) There is a danger of self-deception, stemming from the cycle of important conferences that have awakened awareness of the need for sustainable development and produced massive programmes of action but have not yet solved the real problem of shaping societies to meet the challenges of the world 40 years from now. The sense of urgency has not been developed fully and effectively, and comprehensive action programmes have yet to acquire full momentum. Strategies and education and information systems operating on different time scales should be designed to guide people and communities to that end;

(h) The educational process must incorporate a long-term perspective, recognizing that in 40 years the world will have to achieve a fundamental reconfiguration of resources. Education must address specific problems of the environment, such as the use of water and energy. The future custodians of the Earth must be given the practical knowledge for those tasks.

IV. CONCRETE WAYS OF FORGING ALLIANCES

A. Follow-up to actions agreed by the Board at its second session

71. The questionnaire approved at the second session of the Board (E/CN.17/1994/13, annex) had been further simplified by the secretariat. It will be circulated to the holders of the UNEP Global 500 Award and to the participants in the Conference on the theme "Partnerships for change" held in Manchester, United Kingdom of Great Britain and Northern Ireland, in September 1993. Analysis of the responses will be considered by the Board at a future meeting. A pilot circulation of the questionnaire to over 60 organizations, mainly in Chile, has yielded over 40 responses. The principal conclusions of this analysis are:

(a) The establishment of alliances must be included in a defined plan of action, with clear objectives, specific time periods and procedures so that they can be followed up by the participants and the contributions of the parties evaluated;

(b) The process of establishing alliances should itself form part of the general framework for implementing Agenda 21;

(c) Alliances are difficult to establish unless the prospective partners know about one another. The United Nations system is not well known and its agencies need to publicize their role and potential contributions;

(d) The basic components of civil society, its organizations and their functions as actors in sustainable development also need to be identified;

(e) The United Nations needs to be selective in defining the entities with which it seeks alliances, and in particular:

(i) the entities should have adequate support from any sectors they purport to represent, and sufficient professional background in their respective areas;

(ii) links should be established, by preference, with national or international groupings of institutions;

(iii) international or national registries of duly qualified entities can facilitate this process;

(iv) alliances sometimes work best at the local level, where civil society can be coordinated by municipal governments;

(v) alliances between the United Nations system, national Governments and the civil society are desirable in certain cases, such as the national sustainable development coordination councils or round tables for implementing Agenda 21;

(vi) the work of United Nations bodies and organizations at the national level can be valuable in developing alliances between national Governments and civil society;

(vii) the United Nations needs to encourage spontaneous creativity among existing grass-roots organizations, rather than promote new top-down institutions;

(viii) the establishment of new forums in parallel to existing national or international alliances for implementing Agenda 21 should be approached with caution;

(ix) education is the most important factor in ensuring the support and involvement of civil society in the sustainable development process;

(x) the United Nations system could assist Governments in developing mechanisms for resolving conflicts on environmental issues at the national or local levels;

(xi) the circulation of information about positive experiences of sustainable development, perhaps through a round table involving those who report such experiences, could be valuable, and the United Nations might give priority to enlarging its database of entities with such experience and giving wider access to it;

(xii) the results of the enquiry based on the questionnaire should be publicized; and

(xiii) a simplified version of Agenda 21 should be distributed widely.

B. Conclusions

72. Regarding concrete ways of forging alliances, the Board reached the following conclusions:

(a) Different kinds of alliance are needed in different cultural settings and there is unlikely to be a universal rule. Social and national traditions must be respected: societies must choose their own ways of mobilizing people. The United Nations can only facilitate, not direct;

(b) The United Nations should note the call for working more closely at the national level. The Board has noted that many aspects of the working of the United Nations system are under review, and this will include the respective functions of UNDP offices, the regional commissions, UNEP offices and other decentralized parts of the United Nations system. The Board wishes to be kept informed of the outcome of this review;

(c) Decentralization of action on sustainable development is proceeding rapidly. In India, for example, from the earliest times, each village community has developed as a self-sufficient social, economic and cultural society, and now powers of local self-government have been conferred by the law on them;

(d) At the national level, cross-sectoral links within Governments and between national leaders and international experts are valuable: the China Council for International Cooperation on Environment and Development is a good model. National and regional councils for sustainable development and round tables involving Government, industry and environmental and developmental non-governmental organizations are being established in many countries and should be supported strongly;

(e) There are several good simplified versions of Agenda 21 and accounts of major United Nations conferences, in various languages. They should be publicized and made widely available;

(f) Alliances with non-governmental bodies is made difficult by diversity, different constituencies, different styles of operation, sheer numbers and different mandates. In the area of business and the environment, global bodies, such as the Business Council for Sustainable Development and the World Industry Council for Environment, have some general recognition, but in the environmental conservation area there are only a few representatives bodies, such as the International Union for the Conservation of Nature (IUCN);

(g) The Working Group on the Review of Arrangements for Consultation with Non-Governmental Organizations is none the less making progress, and the Board has noted the need for this progress to include the development of effective ways for the non-governmental organization community to contribute to United Nations discussions;

(h) There is need for further consideration of how the non-governmental movement, within the major groups recognized at UNCED, might draw itself together and relate to the United Nations. One positive mechanism is to devolve the linkage to the national level and work with national commissions for sustainable development, national committees linked to the specialized agencies, round tables or other groups. The Earth Council may also provide useful machinery through its development of national councils;

(i) There are obstacles to cooperation. Some business-sector groups are resistant to working with or supporting the United Nations. Many developed country Governments feel fully capable of managing their national sustainable development programmes without United Nations involvement. On the other hand, many developing countries welcome assistance from the United Nations. What is important to most Governments is that their sovereign right to manage the national development process is not challenged;

(j) Governments need to be aware that partnership with the United Nations and involvement in its programmes does not threaten their sovereignty but advances their interests. Many individuals would welcome partnership with the United Nations out of idealism.

C. Addressing the future

73. While some developed countries have stable populations, global growth is adding the equivalent of the entire population of the United States of America

to the world every 2.5 years. Although fertility is now declining in most regions, world population is expected to reach 8.3 billion in 2025 and is likely to approach its peak in 2045 at 9.6 billion or even more. Unless preparations are made now, these changes are liable to cause environmental degradation, social breakdown and conflict. The various scenarios of disaster that will result from inaction are all intolerable.

74. The United Nations and the world community must accordingly act now to plan for technological and social actions that would allow the planet to give nearly 10 billion people a reasonable quality of life 50 years hence. Such action will demand the harnessing of the best intelligence available, major technological advances and substantial financial investments. But the scenarios must be worked out in realistic detail. The needs and pressures will differ from region to region; Africa, in particular, faces acute problems. New social paradigms will be needed. It is important also to avoid technologies that involve high potential risks for later generations. It must be accepted that some losses of biodiversity are inevitable on any scenario; the aim is to minimize these. New approaches to trade and environment questions will be needed. Development must be sound from a social, economic and environmental standpoint.

75. The United Nations system is being reviewed in order to enhance its effectiveness in addressing these challenges. But the effectiveness of world-wide action clearly depends on finance. It is deplorable that UNCED has not been followed by the provision of new money for sustainable development. The Global Environmental Facility has been assigned a mere US$ 2 billion for narrowly defined purposes. The major economic powers should honour all their UNCED commitments, including their pledges to support the environment and development work of the United Nations. The terms of the agreed conventions should not be relaxed. It is imperative that the UNCED consensus be implemented in full.

76. The greatest financial waste is in military expenditure and this is dissipating resources needed for sustainable development. Agents from rich developed countries continue to promote arms sales to developing countries, and one such agent has recently persuaded several African countries to reverse earlier decisions to switch expenditure to education. The Board noted the case for a campaign to mobilize public opinion against the arms trade and in favour of the transfer to sustainable development of resources not used to purchase arms. This should be an agenda item for the Disarmament Commission. The Board will continue to emphasize the imperative of providing more funds for sustainable development and to stress that funds that would otherwise have been assigned to the military budget are one obvious source. Another major source of funding could be the removal of perverse subsidies that support unsustainable development.

77. The Board will give consideration when preparing its future agenda items to:

(a) The 40-year scenario for a sustainable future;

(b) Ways of linking its agenda to the agenda for development (see A/48/935);

(c) Ways of linking its analysis to the various United Nations summit meetings and to the development of a practical agenda for action;

(d) The removal of perverse subsidies, especially for agriculture and fisheries.

V. ARRANGEMENTS FOR FUTURE WORK

78. The Board held extensive deliberations on its future work, including a full exchange of views with the Secretary-General, who requested the Board to provide guidance on how the theme of sustainable development might be incorporated in each of the several forthcoming major conferences, and how the action programmes that emerged could be more effectively implemented. The Board agreed that the work programme for its fourth session (30 May-1 June 1995) should focus on the three issues outlined below. The Board emphasized the need for adequate inter-sessional preparations. It suggested that the Rapporteur and one or two other Board members meet with the secretariat some six weeks in advance of the next session, review papers that had been prepared or commissioned and draw up draft issue papers for the Board itself.

A. Finance

79. The main issue to be taken up was how to mobilize and transfer resources to areas of need in developing countries. The theme should include the interlinked matters of trade, aid, debt relief, private-sector investment, transfer of technology and human resources development. It should examine the issue of ending perverse subsidies and the scope to transfer resources from the military sector.

B. Cooperation and coordination in the United Nations system

80. The issue was what sorts of improvement in cooperation and coordination in the United Nations system would facilitate the mobilization of finance for the implementation of Agenda 21. In particular, the relationship of the Bretton Woods institutions to the other organizations of the United Nations system would be examined. The relevance of the Consultative Group of Institutes for Agricultural Research (CGIAR) as a model for networks of cooperating institutions would be explored.

C. Alliances

81. The Board would review an analysis of responses to its questionnaire. Based on that analysis, it would conduct an in-depth examination of specific categories, such as the business sector and learned and professional bodies, for ways of enhancing their contribution to the implementation of Agenda 21.

VI. ORGANIZATION OF THE SESSION

82. The third session of the High-level Advisory Board on Sustainable Development was held at United Nations Headquarters from 17-21 October 1994. Panel meetings were held from 17 to 19 October and the plenary session of the Board was held on 20 and 21 October. Fourteen members of the Board attended: Jacques Cousteau, Birgitta Dahl, Martin Holdgate, Saburo Kawai, Valentin Koptyug, Bola Kuforiji-Olubi, Laura Novoa, R. S. Pathak, Qu Geping, Emil Salim, Edouard Saouma, Klaus Schwab, Maurice Strong and Mostafa Tolba. Seven members were unable to attend: Bernard T. Chidzero, Tommy Koh, Celso Lafer, Rita Levi Montalcini, Maria de los Angeles Moreno, Stephan Schmidheiny and Adele Simmons.

83. The officers elected at the first session for the term ending on 30 June 1995 were Bernard Chidzero and Birgitta Dahl (Co-chairpersons) and Martin Holdgate (Rapporteur).

84. The plenary was opened by the Under-Secretary-General for Policy Coordination and Sustainable Development. The Director of the Division for Sustainable Development provided a briefing to the Board on the second session of the Commission on Sustainable Development. The Chairperson and the Bureau of the Commission on Sustainable Development held an exchange of views with members of the Board on 20 October 1994. The Chairperson and Rapporteur of the Board gave an informal briefing on its work to the Second Committee of the General Assembly on 21 October 1994. The Secretary-General addressed the Board and held a dialogue with Board members on 21 October 1994.

85. Preparations for the plenary session were carried out by three panels of the Board, each of which had made inter-sessional preparations by means of correspondence among its members, with the secretariat and in some cases with experts known to the members themselves. The panel on linkages between economic, social and political developments in a changing world comprised Emil Salim and Klaus Schwab (Co-chairpersons), Celso Lafer, Maria de los Angeles Moreno, Edouard Souma and Mostafa Tolba. The panels on capacity-building and concrete ways of forging alliances were merged and comprised Jacques Cousteau and R. S. Pathak (Co-chairpersons), Martin Holdgate, Saburo Kawai, Tommy Koh, Valentin Koptyug, Bola Kuforiji-Olubi, Rita Levi Montalcini, Laura Novoa, Stephen Schmidheiny, Adele Simmons, Maurice Strong and Qu Geping.

86. Substantive services for the session were provided by the Department for Policy Coordination and Sustainable Development.

Notes

1/ Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

Annex I

AGENDA

1. Opening of the session.
2. Adoption of the agenda.
3. Report of the Board on its second session.
4. Matters arising, not covered under other items.
5. Linkages between economic, social and political developments in a changing world.
6. Capacity-building: value-added education for sustainability.
7. Concrete ways of forging alliances.
8. Consideration of opportunities for the Board to contribute to the work of the United Nations.
9. Organization of the work of the Board.
10. Adoption of the report of the Board on its third session.

Annex II

CURRICULA VITAE OF BOARD MEMBERS

Chairman

Bernard CHIDZERO (Zimbabwe). Senior Minister of Finance, Economic Planning and Development. Other posts held in the past include Deputy Secretary-General of UNCTAD; Resident Representative, United Nations Development Programme. Received professional education in Canada and United Kingdom of Great Britain and Northern Ireland (Economics).

Vice-Chairperson

Birgitta DAHL (Sweden). Speaker, Parliament of Sweden. Member, Executive Committee of the Social Democratic Party. Member, Advisory Council on Foreign Affairs. Past posts include Minister of Environment (1990-1991), Minister of Environment and Energy (1986-1990), Minister of Energy (1982-1986). Received professional education in Sweden (History and Political Science).

Rapporteur

Martin HOLDGATE (United Kingdom of Great Britain and Northern Ireland). President, Zoological Society of London. Past posts include Director General, World Conservation Union (IUCN) (1988-1994); Chief Environment Scientist and Deputy Secretary, Environment Protection, Department of Environment (United Kingdom) (1976-1988); President, Governing Council, UNEP (1983-1984). Received professional education in the United Kingdom (Zoology). Author of A Perspective of Environmental Pollution (1979) and joint editor of two major UNEP volumes on the state of the world environment, 1972-1982 and 1972-1992.

Members

Jacques Yves COUSTEAU (France). Chairman, Council on the Rights of Future Generations; President, the Cousteau Society. Past posts include Director of the Musée océanographique. Received professional education in France (Naval Science and Ocean Ecology). Member, Académie Française. Recipient of numerous awards and honorary degrees for work on the environment. Director of three feature films on oceans. Author or co-author of more than 50 books, the most recent of which is Jacques Cousteau/Whales (1988).

Saburo KAWAI (Japan). Chairman and President, International Development Centre of Japan. Member, Organizing Committee, Earth Council. Past posts include President, Sasakawa Peace Foundation; Board Member, Stockholm Environment Institute; Vice-Chairman and President, Keizai Doyukai. Received professional education in Japan and the United States of America (Law and Economics).

Tommy KOH (Singapore). Ambassador-at-Large, Ministry of Foreign Affairs. Past posts include Permanent Representative to the United Nations; Ambassador to the United States of America and Mexico; High Commissioner to Canada; Professor and Dean, Faculty of Law, Singapore University; President, Third United Nations

Conference on the Law of the Sea; Chairman, Preparatory Committee for and Main Committee of the United Nations Conference on Environment and Development. Received professional education in Singapore, the United States (Law) and the United Kingdom of Great Britain and Northern Ireland. Author of several articles on law of the sea, international relations, environment and development, United Nations and negotiations.

Valentin KOPTYUG (Russian Federation). Director, Institute of Organic Chemistry (Novosibirsk). President, Siberian Branch, Russian Academy of Sciences. Past posts include Rector, Novosibirsk State University; Professor (Chair) of Organic Chemistry. Received professional education in the former USSR (Chemistry). Author of numerous scientific papers and monographs in the fields of organic chemistry and general problems of the environment; founded the journal Chemistry for Sustainable Development (1993).

Bola KUFORIJI-OLUBI (Nigeria). Economist and chartered accountant; received professional education in Nigeria and the United Kingdom of Great Britain and Northern Ireland. Chairperson, Business Council for Sustainable Development and BEWAC PLC, Nigeria. Past posts include Chairperson, Ogun Oshun River Basin Development Authority, Nigeria; Chairperson, United Bank for Africa, PLC, an affiliate of Banque National de Paris and Bankers Trust, where she was responsible for the establishment of a credit scheme for women and rural dwellers. Honorable Secretary of Commerce and Tourism, Federal Ministry of Commerce and Tourism.

Carlos LAFER (Brazil). Professor and Department Head, Public International Law and Jurisprudence, University of São Paulo. Board Member, Metal Leve S/A Industria e Comercio. Past posts include Minister for Foreign Affairs; Head of Brazilian delegation to the tenth session of the Intergovernmental Committee for Science and Technology. Expert adviser in the area of science and technology. Received professional education in Brazil and the United States of America (Law and Political Science). Author of many books and articles in the area of international economic law, international relations, jurisprudence and political theory.

Rita LEVI MONTALCINI (Italy). Super-expert, Institute of Neurobiology, National Research Council (CNR). Past posts include Director, Cellular Biology Laboratory (CNR). Professor of Neurobiology, Institute of Biology, Washington University. Received professional education in Italy (neurobiology). Received Nobel prize in Medicine/Physiology and numerous honorary degrees. Author of numerous monographs in the field of neurobiology.

Maria de Los Angeles MORENO (Mexico). Member of Congress. Past posts include Subsecretary of Evaluation, Secretariat of Programming and Budgeting; Subdirector of Planning, Division of Employment, UCECA; Subdirector of Studies on Income Distribution, Secretariat of Labour. Received professional education in Mexico and the Netherlands (Socio-economic Planning). Author of Women in the Mexican Economy (1966).

Laura NOVOA (Chile). President, PARTICIPA. General Counsel and member of Executive Committee, Member of the law firm Philippi, Yrarrazaval, Pulido and Brunner (banking, foreign investment, mining, corporate law); member, Comision

Verdad Reconciliation. Received professional education in Chile and the United States of America (Law).

R. S. PATHAK (India). Honorary Master of the Bench, Gray's Inn, London; Chairman, Indian National Steering Committee in Leadership in Environment and Development Programmes; Distinguished Visiting Professor, Institute of Advanced Studies, Edinburgh. Past posts include Judge, International Court of Justice (The Hague); Chief Justice of India; Judge, Supreme Court of India; Chief Justice, Himachal Pradesh High Court; President, Indian Society of International Law. Received professional education in India (Law). Author of many research papers on international law, the law of the sea and other subjects, including Environmental Change and International Law: New Challenges and Dimension (1993).

QU Geping (China). Chairman, Environmental Protection Committee, National Peoples' Congress. Past posts include Vice-Chairman, Environmental Protection Commission, State Council Administrator, Environmental Protection Agency, People's Republic of China. Head of Mission of China to UNEP. Received professional education (Engineering) in China and the United Kingdom of Great Britain and Northern Ireland. Author of numerous publications on environmental issues, including China's Environment and Development (1993); Studies on Environmental Services in China.

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